

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

United States Courts
Southern District of Texas
FILED

HM

JAN 20 2005

Michael N. Milby, Clerk

JESSICA AND KEVIN HAFSTIENN
INDIVIDUALLY AND AS NEXT
FRIEND OF TAYLOR HAFSTIENN,
DECEASED

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VS.

NO. H-03-1646

BMW OF NORTH AMERICA, L.L.C.
AND BAYERISCHE MOTOREN
WERKE AG

DEFENDANTS BMW OF NORTH AMERICA, LLC AND
BAYERISCHE MOTOREN WERKE AG'S
OPPOSED MOTION TO EXCLUDE EXPERT TESTIMONY OF THOMAS M. GRUBBS

TO THE HONORABLE UNITED STATES DISTRICT COURT:

Now come BMW OF NORTH AMERICA LLC and BAYERISCHE MOTOREN WERKE AG ("BMW"), Defendants in the above-styled and numbered cause, and file this their opposed motion to exclude the testimony of Plaintiffs' purported expert on accident reconstruction, Thomas M. Grubbs. In support of their motion to strike Grubbs's testimony, BMW would respectfully show the Court as follows:

I. INTRODUCTION

This case arises from a two-car automobile accident that allegedly occurred on September 16, 2000, in The Woodlands, Texas. At that time, Jessica Hafstienn was driving her 1999 BMW 323i with her son Taylor Hafstienn as a passenger. At the intersection of Grogan's Mill Road and Millpark Drive, Jessica Hafstienn failed to yield right-of-way and was violently struck on the side by a Sierra GMC pick-up truck driven by Ross Hardin, who was traveling at an excessive rate of speed. According to the police report, Hardin's pickup

was traveling at least 73 miles per hour in a 45 mile per hour zone at the time of the accident. Plaintiffs have sued BMW of North America, LLC and Bayerische Motoren Werke AG under a variety of theories including negligence and products liability. Plaintiffs have designated Thomas M. Grubbs to testify regarding accident reconstruction.¹ His testimony should be excluded under the *Daubert* standard.

II. ARGUMENT AND AUTHORITIES

A. Standards Governing Admissibility of Expert Opinions

In *Daubert v. Merrill Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), the United States Supreme Court addressed the principles applicable to determining the admissibility of opinion testimony offered by expert witnesses under the Federal Rule of Evidence 702. *Daubert*, 509 U.S. at 589. Rule 702 allows a qualified expert to testify “if scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue.” FED. R. EVID. 702. An expert’s testimony must rest both on a reliable foundation and be relevant to the task at hand. *Daubert*, 509 U.S. at 597. If an expert’s testimony is not based on reliable scientific knowledge, or if it is based on such knowledge but fails to relate to any material facts, then it is not useful and, therefore, not relevant. The proponent of the evidence bears the burden of establishing its admissibility by a preponderance of the evidence. *Id.* at 593.

The trial court has the obligation and broad discretion to be the “gatekeeper” in determining the reliability and relevance of the proposed evidence. *Kumho Tire Co., Ltd., v. Carmichael*, 526 U.S. 137, 141 (1999). As gatekeeper, the trial court must make certain that an expert, whether basing testimony upon professional studies or personal experience,

¹ Deposition of Grubbs taken April 30, 2003, is attached hereto as Ex. A; deposition of Grubbs taken September 3, 2004, is attached hereto as Ex. B.

employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field. *Id.* at 152. In fulfilling its obligation as gatekeeper, the trial court must conduct a two-tier analysis of the expert's work. The first tier of the analysis requires an examination of the reliability of the expert testimony, based on: (1) the qualifications of the expert;; and (2) the grounds upon which the expert bases his opinion. *Watkins v. Telsmith, Inc.*, 121 F.3d 984, 989 (5th Cir. 1997), *citing Cummins v. Lyle Indus.*, 93 F.3d 362, 367 (7th Cir. 1996). The focus is on whether the reasoning or methodology underlying the testimony is scientifically valid and can be properly applied to the facts in issue. *Daubert*, 509 U.S. at 592-93, 113 S. Ct. at 2796. Rule 702 provides guidelines to aid the trial court in ascertaining the validity of the opinion: (1) the testimony is based upon sufficient facts or data; (2) the testimony is the product of reliable principles and methodology; and (3) the witness has applied the principles and methodology reliably to the facts of the case. FED. R. EVID. 702; *Seatrax, Inc. v. Sonbeck Int'l, Inc.*, 200 F.3d 358, 371-72 (5th Cir. 2000); *Cooper v. Smith & Nephew, Inc.*, 259 F.3d 194, 199 n. 1 (4th Cir. 2001). Other non-exclusive factors include: (1) whether the theory has been/can be tested; (2) whether the theory has been subjected to peer review and publication; (3) the potential or known rate of error; (4) whether the theory has been generally accepted; (5) whether the theory is from litigation or naturally flowed from research; (6) whether other alternative explanations have been ruled out; and (7) whether the proposed expert sufficiently connected the proposed testimony with the facts of the case. *Lauzon v. Senco Prod., Inc.*, 270 F.3d 681, 686-87 (8th Cir. 2001).

In the second tier of *Daubert* analysis, the trial court must also determine that the testimony "fits" the case before it; that is, the evidence will assist the trier of fact by being relevant to the issues raised in the case. FED. R. EVID. 702; *Daubert*, 509 U.S. at 591-92; 113

S. Ct. at 2795-96. As the Fifth Circuit Court of Appeals has explained, “the trial judge ought to insist that a proffered expert bring to the jury more than the lawyers can offer in argument. Indeed, the premise of receiving expert testimony is that it will assist the trier of fact to understand the evidence or to determine a fact in issue.” *In re Air Crash Disaster at New Orleans, La.*, 795 F.2d 1231, 1233 (5th Cir. 1986). The expert must testify to something more than what is obvious to a layperson to be of any assistance to the jury. *Ancho v. Pentek Corp.*, 157 F.3d 512, 519 (7th Cir. 1998). Just because a witness is an expert in one field does not mean that the expert may testify in all aspects and specialties of that field. See *Wilson v. Woods*, 163 F.3d 935, 937-38 (5th Cir. 1999) (fire reconstruction and investigation specialist was not allowed to testify regarding automobile reconstruction); *Perkins v. Volkswagen of Am., Inc.*, 596 F.2d 681, 682 (5th Cir. 1979) (mechanical engineer who had no experience designing automobiles was not allowed to testify as an expert on automobile design).

B. Grubbs’s Testimony Should Be Excluded

Grubbs is a professional expert witness who has no special knowledge or experience to be able to reconstruct the accident in question. He simply input certain information from the Texas Department of Public Safety (DPS) into a computer program and observed a crash test that did not involve accident conditions or vehicles even remotely similar to those underlying this suit. Grubbs’ methodology is flawed, his testimony would provide no assistance to the jury, and his testimony should not be allowed.

1. Grubbs Lacks Qualifications to Render Opinions Regarding Accident Reconstruction

Grubbs is a paid professional witness who is not qualified to testify in the area of accident reconstruction. Grubbs has no formal education in accident investigation or accident reconstruction. (Ex. “A,” Deposition of Thomas Grubbs at p. 42). He has no certificate or

degree in either accident reconstruction or accident investigation. (Ex. A at p. 42). In fact, no employee of his company has a degree or certificate in the field of accident investigation or reconstruction. (Ex. A at p. 47).

Grubbs has never been employed by the Texas Department of Public Safety. (Ex. A at p. 47). He has never taught any courses in accident investigation or accident reconstruction at an institute of higher learning. (Ex. A at p. 43). He has not published in the area of accident investigation or accident reconstruction. (Ex. A at p. 43). He has authored no publications on the subject of vehicle dynamics. (Ex. A at p. 240). He has not published the methodology used to reconstruct this accident, nor its known rate of error. (Ex. A at pp. 43-44).

Grubbs does not have a degree in physics, nor do any of the employees of his company. (Ex. A at p. 47). He is not a practicing metallurgist. (Ex. A at p. 74). He is not an expert in biomechanical engineering. (Ex. A at p. 74). He does not have a degree in automotive engineering. (Ex. A at p. 74). He has never published in any Society of Automotive Engineers ("SAE") journal nor has he held any positions with SAE. (Ex. A at p. 77). He has not given any presentations to SAE or been a member of any of their subcommittees. (Ex. A at pp. 77-78). He has not published any materials for the American Society of Mechanical Engineers (ASME) and has not presented any papers to the ASME. (Ex. A at p. 78). He has not held any office or position with the ASME. (Ex. A at p. 78). He does not hold any patents. (Ex. A at p. 79). He has not taken any courses in vehicle dynamics. (Ex. A at p. 229). He does not have a Ph.D. in any field. (Ex. A at p. 78).

In relation to the crash test performed by KARCO, Grubbs had never created a protocol for a crash test simulation or participated in or observed any Federal Motor Vehicle Safety Standard 214 crash test or any other crash test under any federal, government, or

industry standard. (Ex. B at pp. 78-79). When he was working at NASA prior to his becoming a full-time paid expert witness, his job responsibilities did not include preparing crash test protocols for automobiles or participating in automobile crash tests. (Ex. B at p. 127).

Grubbs has been working as an expert testifying for lawyers since 1973. (Ex. A at p. 70). He has been doing nothing but forensic work full-time since 1994 when he retired from NASA. (Ex. A at p. 75). He has been involved in at least 60 lawsuits with Provost & Umphrey over the last 15 to 20 years. Provost & Umphrey is his largest client. (Ex. A at pp. 50-54; Ex. B at p. 6). In all of those cases, he has worked for the Plaintiffs seeking money damages, and 100% of the automobile products liability cases in which he is involved is on behalf of plaintiffs' lawyers suing automobile manufacturers. (Ex. A at p. 54; Ex. B at pp. 126-127).

A purported expert, such as Grubbs, who lacks the necessary technical and/or scientific knowledge and training and who has not conducted any studies or investigation, is not qualified to testify regarding accident reconstruction. See *Rosado v. Deters*, 5 F.3d 119, 124 (5th Cir. 1993) (affirming district court's holding that the purported expert accident reconstructionist could not testify. The "expert" lacked scientific, technical, or other specialized knowledge in the area of accident reconstruction, as he had last taken accident reconstruction classes in 1965 and had taken no refresher courses since).

In *Wilson v. Woods*, 163 F.3d 935, 937-38 (5th Cir. 1999), the supposed expert reconstruction was disqualified from testifying. The proposed witness had no certification as an accident reconstructionist, had not taught any accident reconstruction classes, did not have a Ph.D., had been disqualified from testifying in another court, had never conducted any studies, had not taken any measurements or examined the automobile involved in the underlying accident at issue, could not show reliability of his data, and was unable to show

that his training or experience as a mechanical engineer was different from ones received by other mechanical engineers or gave him expertise in accident reconstruction. *Id.* The court quoted with approval the district court's observation regarding the lack of qualification that "[n]one of the people who seem to be testifying have published in the field [of accident reconstruction], have done experimentation in the field; and other than getting a correspondence course from this Northwestern Traffic Institute, which pads the resume, none seem to have anything other than, in most instances, a general scientific background." *Id.* Because the proposed witness's general scientific background did not give him a greater expertise in accident reconstruction than any other individual with similar general scientific background, the Fifth Circuit held it was not error for the district court to exclude the testimony of the purported expert accident reconstructionist. *Id.*

Grubbs lacks academic, practical, technical, or scientific background giving him special knowledge regarding accident reconstruction. He has never published or conducted any tests in the field and has no certificates in accident reconstruction. Much like the expert excluded in *Wilson*, Grubbs is a professional witness who is not qualified to testify in the field of accident reconstruction, because he is not an expert in that field. Grubbs is clearly biased and unqualified and should not be permitted to testify.

2. Grubbs' Methodology is Unsupported and Flawed

The methodology employed by Grubbs is not based upon any peer-reviewed theory and does not even account for the facts of this case. Grubbs cannot identify any article by title, author, date of publication, or location that supports his reconstruction of the accident in question. (Ex. A at p. 45). He does not cite any publications or articles upon which he relied in his reports in this case. (Ex. A at p. 45). He apparently has not relied upon any peer-reviewed

documents because he did not bring any to his deposition to support his methodology in this case. (Ex. A at pp. 240, 242). He cannot cite to any materials that addressed the rate of error in his methodology or that would otherwise support his opinions in this case. (Ex. A at p. 242).

He has never done any testing to verify the reliability of the EDSMAC program upon which he relies. (Ex. A at p. 79). He could provide no data, studies, or peer-reviewed literature confirming the reliability of the software. He has not developed any accident reconstruction computer software by himself. (Ex. A at p. 81). He did not do any testing at the scene of the accident to verify the coefficient of friction or determine it separate and apart from the Department of Public Safety. (Ex. A at pp. 91, 101). He has never actually measured the crush on the pick-up or done an analysis of an exemplar GMC Sierra pick-up. (Ex. A at pp. 132, 135-136). He has no basis upon which to determine how the crush occurred. (Ex. A at p. 135). He has never seen the pick-up truck involved in this case or all of the BMW involved in this case. (Ex. A at pp. 101-102). He has never seen the tires on the BMW. (Ex. A at pp. 154-155). He has not weighed the remaining portion of the BMW. (Ex. A at pp. 228-229). He has never seen an overview photograph of the pick-up. (Ex. A at pp. 141-142). He did not make any calculations of the crush on the BMW. (Ex. A at pp. 213-214). He has not done any testing at all with regard to this case. (Ex. A at p. 101).

Basically, all Grubbs did in this case was run a computer program using information related to the two weights of the vehicles to simulate the accident. (Ex. A at p. 163). He did not do anything else to verify his results. (Ex. A at pp. 164-165). The computer program, however, does not relate to or work on a situation where the vehicle separates. (Ex. A at pp. 169, 172-173). In fact, when he first ran this program, his initial report was factually incorrect and it stated that Taylor was ejected from the BMW. (Ex. A at pp. 68, 190).

Moreover, the EDSMAC program he ran did not even involve a simulation with the BMW vehicle involved in this case. The program used a BMW 740 (7 Series), a much larger vehicle, with its weight changed to reflect that of a BMW 323i. (Ex. A at p. 218). Grubbs just assumed the same stiffness for a smaller BMW without any factual basis. (Ex. A at p. 218). He did not take anything into consideration in reconstructing the accident that was unique to the BMW 323i. (Ex. A at pp. 221-222).

Using the same EDSMAC program, which did not and cannot replicate the accident conditions underlying this case, Grubbs ran simulations and devised the protocol for KARCO to perform a crash test. (Ex. B at pp. 36, 38, 163). In running the simulations for the crash test, he assumed that the target vehicle would be stationary or going 0 miles per hour and that the bullet vehicle had varying speeds, and there would be 30 ½ miles per hour Delta V on the target vehicle. (Ex. B at pp. 36, 44, 45). Grubbs, however, knew that in the real accident the target vehicle was not stationary, but moving. (Ex. B at p. 44). The actual crash test was done by KARCO at its facility. The vehicles used were a Volkswagen for the target vehicle which was not moving. (Ex. B at pp. 58, 70). The bullet vehicle, the pickup truck, was running at actual speed of about 64 miles per hour during the crash test and the brakes were applied during the test. (Ex. B at pp. 58, 77, 85, 118-119). The crash test results show that none of the vehicles rolled over, the left front tire of the bullet pickup truck became deflated, the truck traveled 24 feet after the impact, and the target vehicle traveled 82 feet after impact. (Ex. B at pp. 58, 117, 119, 122, 128).

The results of the crash test are entirely unreliable and cannot assist a jury in this case. First, the vehicles involved were different from the ones involved in the accident. For example, the target vehicle in the real accident was a BMW model 323i. The target vehicle used in the

crash test was a Volkswagen, which: (1) has a different gross weight, (2) is longer in length and wheel base, (3) had different tire sizes, (4) had different tip-over ratio (vertical center of gravity), and (5) different yaw inertia. (Ex. B at pp. 55-58). Grubbs did not perform a comparison of the welding specifications for the Volkswagen with those for the BMW or the rigidity or elasticity of the side structure of the two vehicles and did not perform any measurements of the actual vehicles before creating the protocol for the crash test. (Ex. B at pp. 51-55). Furthermore, in the actual accident, the target vehicle, the BMW, was moving and was not stationary, unlike the target Volkswagen vehicle in the crash test. (Ex. B at p. 44).

The truck that crashed into the BMW in the underlying accident was, according to the police report, traveling at about 73 miles per hour when it crashed into the BMW. Almost no brakes, if any, were applied, as indicated by the skid marks and in the police report. Grubbs' simulation and the protocol for the crash test dictated that the bullet vehicle strike a non-moving or stationary target vehicle, that the bullet vehicle be traveling between 61 and 69 miles per hour, and that brakes be applied. (Ex. B at pp. 70, 77, 119).

The result of the crash test is also different from the actual accident. In the real accident, both vehicles rolled over. Furthermore, the target vehicle, the BMW, spun about 400 degrees and traveled about 87 feet, while the target vehicle in the crash test, the Volkswagen, did not spin at all and traveled about 82 feet. (Ex. B at p. 119). The bullet vehicle in the actual accident traveled 186 feet, but the bullet vehicle in the crash test traveled about 24 feet after impact. (Ex. B at p. 117). In establishing his protocol, Grubbs never thought about or considered crabbing² and is not even aware of what crabbing is in regard to a crash test. (Ex. B at pp. 83-84). To come up with a protocol, Grubbs simply ran the numbers in his EDSMAC

² Crabbing involves fixing the vehicle's tires at an angle. (Depo. of Matthew Ivory, attached as "Exhibit C" at p. 102). Crabbing is a way to compensate for one vehicle being stationary and gives motion to the stationary

program and did not even measure or run the crash test himself. Although he made no effort to compensate for the stationary target vehicle and the lower speed at which the crash test bullet vehicle was run, he stated that he could tell the jury what would have happened to the Volkswagen target vehicle in the KARCO crash test if he had run it at 72 or 73 miles per hour. In his deposition, however, he was not able to testify as to what the results would be if indeed the bullet vehicle had been operated at 72 or 73 miles per hour. (Ex. B at pp. 47-48). Grubbs's opinion has absolutely no support in a scientifically reliable peer-reviewed publication indicating that when you have a test condition with one vehicle stationary and another where both vehicles are moving, then the Delta V will increase dramatically over a condition where both vehicles are moving. He stated that he reached his conclusion after running the numbers and figures in the EDSMAC program which he used to simulate and come up with his protocol for the crash test. (Ex. B at pp. 100-101).

Put simply, Grubbs is not qualified to do an accident reconstruction here, and the basis for the accident reconstruction he did is not sound or scientifically based. It has not and cannot be verified and was initially incorrect. It does not take into account the specific factors involved in the accident and is completely unreliable. See, e.g., *Seatrax, Inc.*, 200 F.3d at 372 (failure or appraisal expert to conduct independent analysis of valuation figures was one of the "insurmountable obstacles" in party's attempt to qualify him as an expert); *Boyd v. State Farm Ins. Co.*, 158 F.3d 326, 331 (5th Cir. 1998) (without more than his credentials and subjective opinion, an expert's testimony which lacks the materials or data that the opinion is based upon as well as the reasoning process underlying that opinion is inadmissible); *Christophersen v. Allied-Signal Corp.*, 939 F.2d 1106, 1115-16 (5th Cir. 1991) (overruled on other grounds by

vehicle. (*Id.*). Crabbing was not a part of Grubbs's protocol for the crash test. (*Id.*).

Daubert) (witness's "scientific hunch" which is unexplained or unsupported by any methodology that witness utilized to reach his opinion is not admissible).

In an opinion issued on December 31, 2004, the Texas Supreme Court found that the jury would not be assisted by the unreliable opinion of an expert who failed to conduct tests, cite studies, or perform calculations in support of his theory, which was not peer-reviewed. *Volkswagen of Am., Inc. v. Ramirez*, ___ S.W.3d ___, 2004 WL 3019227 at *3 - *5 (Tex. 2004). In *Ramirez*, plaintiffs alleged that a bearing defect in the left rear wheel of the Volkswagen Passat driven by Haley Sterling caused her to crash into a second vehicle, a mustang, oncoming from the opposite direction of the Passat. *Id.* at *3. According to Plaintiffs, the left rear wheel of the vehicle detached yet stayed tucked in as Sterling lost control of the Passat, which crossed the concrete median. *Id.* The issue was whether the damage to the wheel had occurred before or after the crash. *Id.*

Like Grubbs, Ronald Walker, plaintiff's accident reconstructionist, theorized that the accident occurred because of a defect in the vehicle rather than driver error. *Ramirez*, ___ S.W.3d ___, 2004 WL 3019227 at *3. According to Walker, the wheel of the Passat detached before the crash but was able to stay in the rear wheel well as the Passat traversed over the median, collided with the mustang, and partially spun. *Id.* To explain his conclusion, Walker cited to the "general" law of physics and accepted scientific and engineering principles, without identifying the specific laws of science and principles or explaining how these generally accepted principles supported his theory. *Id.* at *3-*4, *5. Much like Grubbs, he failed to conduct or cite any tests to support his theory and had not read any publications or studies which would corroborate his findings. *Id.* Citing *Viterbo v. Dow Chem. Co.*, 826 F.2d 420, 421 (5th Cir. 1987), the Texas Supreme Court refused to take Walker's "say-so" and found that

“Walker’s reliance on the ‘laws of physics’, without more, is an insufficient explanation. Although Walker maintains that the methods and formulas he employed are the ones generally accepted and utilized in the accident reconstruction profession, he does not explain how any of the research or tests he relied on support his conclusion.” *Id.* at *5. Because Walker failed to connect the data he relied upon with the opinion offered, the analytical gap rendered his opinion unreliable.

Grubbs, too, failed to conduct any meaningful tests, cannot cite to any peer-reviewed publication (or for that matter, any publication at all) supporting his theory, has not performed any measurements or calculations, and failed to produce any publication which would bridge the “analytical gap” between his data and conclusion. Rather, Grubbs relied upon his bare opinion, which is unsupported by any objective scientific analysis. Without any such support, Grubbs’ subjective opinion is an expert’s “say so,” is unreliable, and would not assist the jury to resolve a fact issue. For all these reasons, Grubbs’s testimony should be excluded.

III. PRAYER

WHEREFORE, PREMISES CONSIDERED, Defendants BMW of North America, LLC and Bayerische Motoren Werke AG pray that the testimony of Thomas M. Grubbs be excluded, and for such other and further relief, both at law and in equity, to which Defendants BMW of North America, LLC and Bayerische Motoren Werke AG may show themselves justly entitled.

Respectfully submitted,



J. MICHAEL MYERS
State Bar No. 14760800
Federal Bar No. 15110
Direct Line: (210) 731-6309
Direct Fax: (210) 785-2909
E-mail: jmm@ball-weed.com
BALL & WEED, P. C.
Trinity Plaza II, Suite 500
745 East Mulberry
San Antonio, Texas 78212
(210) 731-6300

ATTORNEY FOR DEFENDANTS,
BMW OF NORTH AMERICA, LLC and
BAYERISCHE MOTOREN WERKE AG

CERTIFICATE OF CONFERENCE

Counsel for defendants has conferred with plaintiffs' counsel in an attempt to resolve this dispute without the necessity of Court intervention. Plaintiffs' counsel opposes this Motion.



CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the above and foregoing document has been provided to all known counsel of record as indicated below, on the 19th day of January, 2005.

Mr. Joe J. Fisher, II
PROVOST * UMPHREY LAW FIRM, L.L.P.
490 Park Street
P.O. Box 4905
Beaumont, Texas 77704
SBN: 00787471
409/835-6000
FAX: 409/813-8609
ATTORNEY FOR PLAINTIFFS

- ☐ Local Courier Service
- ☐ Hand Delivery
- ☐ Facsimile
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- ☐ U.S. Certified Mail
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- ☐ Other courier service


J. MICHAEL MYERS